

SEQUENCE LISTING

<110> Yale University

<120> TREATMENT AND PREVENTION OF CANCER AND PITUITARY
DISORDERS WITH LATS PROTEINS, DERIVATIVES AND
FRAGMENTS, AND LATS KNOCK-OUT ANIMAL MODELS

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<170> PatentIn Ver. 2.0

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Trp Gln Glu Gly Tyr Pro Pro Pro Pro Leu Thr Ser Pro Met Asn	
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Gln Pro Ile Ile Met Gln Ser Thr Ser Lys Phe Asn Phe Thr Pro Gly	
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Arg Pro Gly Val Gln Asn Gly Gly Gly Gln Ser Asp Phe Ile Val His	
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Gln Asn Val Pro Thr Gly Ser Val Thr Arg Gln Pro Pro Pro Pro Tyr	
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Pro Leu Thr Pro Ala Asn Gly Gln Ser Pro Ser Ala Leu Gln Thr Gly	
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Asn Val Pro Gly Leu Gln Thr Ala Trp Pro Gln Ser Ser Ser Ala Pro	
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Ala Gln Ser Ser Pro Ser Gly Gly His Glu Ile Pro Thr Trp Gln Pro	
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Ile Thr Pro Ala Pro Ile Gln Gln Pro Val Lys Ser Met Arg Val Leu	
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His Ile Lys Leu Thr Asp Phe Gly Leu Cys Thr Gly Phe Arg Trp Thr	
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Cys Leu Ala His Ser Leu Val Gly Thr Pro Asn Tyr Ile Ala Pro Glu	
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Ser Asp Gly Ser Glu Glu Glu Asn Ile Ser Asp Thr Leu Ser Gly Trp	
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 Tyr Val

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Ser Gly Ser Gly Ile Ala Ala Phe Ala Gln Ala His Pro Ser Asn Gly
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Gln Arg Val Asn Pro Pro Pro Pro Gln Val Arg Ser Val Thr Pro
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Pro Pro Pro Pro Arg Gly Gln Thr Pro Pro Pro Arg Gly Thr Thr Pro
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Pro Pro Pro Ser Trp Glu Pro Ser Ser Gln Thr Lys Arg Tyr Ser Gly
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Asn Met Glu Tyr Val Ile Ser Arg Ile Ser Pro Val Pro Pro Gly Ala
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Trp Gln Glu Gly Tyr Pro Pro Pro Pro Leu Thr Thr Ser Pro Met Asn
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Pro Pro Ser Gln Ala Gln Arg Ala Ile Ser Ser Val Pro Val Gly Arg
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 Gln Pro Ile Ile Met Gln Ser Thr Ser Lys Phe Asn Phe Thr Pro Gly
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 Arg Pro Gly Val Gln Asn Gly Gly Gly Gln Ser Asp Phe Ile Val His
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 Gln Asn Val Pro Thr Gly Ser Val Thr Arg Gln Pro Pro Pro Pro Tyr
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 Pro Leu Thr Pro Ala Asn Gly Gln Ser Pro Ser Ala Leu Gln Thr Gly
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 225 230 235 240
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His Ile Lys Leu Thr Asp Phe Gly Leu Cys Thr Gly Phe Arg Trp Thr
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His Asp Ser Lys Tyr Tyr Gln Ser Gly Asp His Pro Arg Gln Asp Ser
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Met Asp Phe Ser Asn Glu Trp Gly Asp Pro Ser Asn Cys Arg Cys Gly
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Asp Arg Leu Lys Pro Leu Glu Arg Arg Ala Ala Arg Gln His Gln Arg
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Cys Leu Ala His Ser Leu Val Gly Thr Pro Asn Tyr Ile Ala Pro Glu
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Cys Asp Gln Glu Met Ala Gly Arg Ala Leu Thr Gln Thr Gly Ser Arg	
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Lys Gly Leu Ala Ser Thr Pro Val Thr Arg Arg Pro Ser Phe Glu Gly	
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His	Pro	Pro	Lys	Gly	Tyr	Ser	Thr	Ala	Val	Glu	Pro	Ser	Ala	His	Phe	165	170	175	
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 Phe Ala Asp Met Arg Lys Gln Lys Ala Pro Tyr Ile Pro Glu Ile Lys
 1020 1025 1030

cac cca acg gac aca tcc aac ttt gat ccc gtg gat ccg gag aag ctg 4252
 His Pro Thr Asp Thr Ser Asn Phe Asp Pro Val Asp Pro Glu Lys Leu
 1035 1040 1045 1050

cgc tcg aat gac tcc acc atg agc agc ggc gat gat gtc gac cag aat 4300
 Arg Ser Asn Asp Ser Thr Met Ser Ser Gly Asp Asp Val Asp Gln Asn
 1055 1060 1065

gac cgc act ttc cac ggc ttt ttc gaa ttt acc ttc cgt cgc ttc ttc 4348
 Asp Arg Thr Phe His Gly Phe Phe Glu Phe Thr Phe Arg Arg Phe Phe
 1070 1075 1080

gac gac aag cag ccg ccg gat atg acg gac gat cag gcg ccg gtt tac 4396
 Asp Asp Lys Gln Pro Pro Asp Met Thr Asp Asp Gln Ala Pro Val Tyr
 1085 1090 1095

gtc tgaaatggat gctctccatg tgcccaacac caacacccccg cccccgaatc 4449
 Val

attgttagtc aaatagtcac aaaaagggga tagaaacat tgagtgggct tgcattgtaa 4509

aggaagcgtg gctatagaat gaaactatct atatacatta tataaattat aggagacagt 4569

agaggcggga gctacgtata tacatacaaa taatatacat atatttgata tatatatata 4629

tatatatgcc gtagggcatg aactgaataa atataaaacg gagccgagta gagatgaaac 4689

gagaggagcg agtcaggacc ttcgaccttt aactgaacat agtatatcct tgtgcactac 4749

tactccacaa caaatatata tttttaaatt gttagaattc aaaagggacc aactggaaat 4809

cgaacctttc tgggtgctcaa agcaaagcaa agcaaagcaa aacaaaacgc cttaaactaa 4869

atgagacgcg aatttaccca accacttcac tctctcctt tctccacctc cgatcggtgg 4929

ccggattcga actcagcagg ctggttgcac ccggccatcc cattgacttc ccattcagaa 4989

ttgagattgc gaggtgtgcg atggagaacg aacggagacc aaaagtcgca cggcagcgat 5049

ataagcgggt cttataagcc taatctaaat ctaaactggg agaacaggac ctatgtatgt 5109

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 aattagttta c 5720

<210> 8
 <211> 1099
 <212> PRT
 <213> *Drosophila melanogaster*

<400> 8
 Met His Pro Ala Gly Glu Lys Arg Gly Gly Arg Pro Asn Asp Lys Tyr
 1 5 10 15
 Thr Ala Glu Ala Leu Glu Ser Ile Lys Gln Asp Leu Thr Arg Phe Glu
 20 25 30
 Val Gln Asn Asn His Arg Asn Asn Gln Asn Tyr Thr Pro Leu Arg Tyr
 35 40 45
 Thr Ala Thr Asn Gly Arg Asn Asp Ala Leu Thr Pro Asp Tyr His His
 50 55 60
 Ala Lys Gln Pro Met Glu Pro Pro Pro Ser Ala Ser Pro Ala Pro Asp
 65 70 75 80
 Val Val Ile Pro Pro Pro Pro Ala Ile Val Gly Gln Pro Gly Ala Gly
 85 90 95
 Ser Ile Ser Val Ser Gly Val Gly Val Gly Val Val Gly Val Ala Asn
 100 105 110
 Gly Arg Val Pro Lys Met Met Thr Ala Leu Met Pro Asn Lys Leu Ile
 115 120 125
 Arg Lys Pro Ser Ile Glu Arg Asp Thr Ala Ser Ser His Tyr Leu Arg
 130 135 140
 Cys Ser Pro Ala Leu Asp Ser Gly Ala Gly Ser Ser Arg Ser Asp Ser
 145 150 155 160

Pro His Ser His His Thr His Gln Pro Ser Ser Arg Thr Val Gly Asn
 165 170 175
 Pro Gly Gly Asn Gly Gly Phe Ser Pro Ser Pro Ser Gly Phe Ser Glu
 180 185 190
 Val Ala Pro Pro Ala Pro Pro Pro Arg Asn Pro Thr Ala Ser Ser Ala
 195 200 205
 Ala Thr Pro Pro Pro Pro Val Pro Pro Thr Ser Gln Ala Tyr Val Lys
 210 215 220
 Arg Arg Ser Pro Ala Leu Asn Asn Arg Pro Pro Ala Ile Ala Pro Pro
 225 230 235 240
 Thr Gln Arg Gly Asn Ser Pro Val Ile Thr Gln Asn Gly Leu Lys Asn
 245 250 255
 Pro Gln Gln Gln Leu Thr Gln Gln Leu Lys Ser Leu Asn Leu Tyr Pro
 260 265 270
 Gly Gly Gly Ser Gly Ala Val Val Glu Pro Pro Pro Pro Tyr Leu Ile
 275 280 285
 Gln Gly Gly Ala Gly Gly Ala Ala Pro Pro Pro Pro Pro Pro Ser Tyr
 290 295 300
 Thr Ala Ser Met Gln Ser Arg Gln Ser Pro Thr Gln Ser Gln Gln Ser
 305 310 315 320
 Asp Tyr Arg Lys Ser Pro Ser Ser Gly Ile Tyr Ser Ala Thr Ser Ala
 325 330 335
 Gly Ser Pro Ser Pro Ile Thr Val Ser Leu Pro Pro Ala Pro Leu Ala
 340 345 350
 Lys Pro Gln Pro Arg Val Tyr Gln Ala Arg Ser Gln Gln Pro Ile Ile
 355 360 365
 Met Gln Ser Val Lys Ser Thr Gln Val Gln Lys Pro Val Leu Gln Thr
 370 375 380
 Ala Val Ala Arg Gln Ser Pro Ser Ser Ala Ser Ala Ser Asn Ser Pro
 385 390 395 400
 Val His Val Leu Ala Ala Pro Pro Ser Tyr Pro Gln Lys Ser Ala Ala
 405 410 415
 Val Val Gln Gln Gln Gln Gln Ala Ala Ala Ala Ala His Gln Gln Gln
 420 425 430
 His Gln His Gln Gln Ser Lys Pro Pro Thr Pro Thr Thr Pro Pro Leu
 435 440 445
 Val Gly Leu Asn Ser Lys Pro Asn Cys Leu Glu Pro Pro Ser Tyr Ala
 450 455 460

Lys Ser Met Gln Ala Lys Ala Ala Thr Val Val Gln Gln Gln Gln Gln
 465 470 475 480
 Gln Gln Gln Gln Gln Gln Val Gln Gln Gln Gln Val Gln Gln Gln Gln
 485 490 495
 Gln Gln Gln Gln Gln Gln Leu Gln Ala Leu Arg Val Leu Gln Ala Gln
 500 505 510
 Ala Gln Arg Glu Arg Asp Gln Arg Glu Arg Glu Arg Asp Gln Gln Lys
 515 520 525
 Leu Ala Asn Gly Asn Pro Gly Arg Gln Met Leu Pro Pro Pro Pro Tyr
 530 535 540
 Gln Ser Asn Asn Asn Asn Asn Ser Glu Ile Lys Pro Pro Ser Cys Asn
 545 550 555 560
 Asn Asn Asn Ile Gln Ile Ser Asn Ser Asn Leu Ala Thr Thr Pro Pro
 565 570 575
 Ile Pro Pro Ala Lys Tyr Asn Asn Asn Ser Ser Asn Thr Gly Ala Asn
 580 585 590
 Ser Ser Gly Gly Ser Asn Gly Ser Thr Gly Thr Thr Ala Ser Ser Ser
 595 600 605
 Thr Ser Cys Lys Lys Ile Lys His Ala Ser Pro Ile Pro Glu Arg Lys
 610 615 620
 Lys Ile Ser Lys Glu Lys Glu Glu Glu Arg Lys Glu Phe Arg Ile Arg
 625 630 635 640
 Gln Tyr Ser Pro Gln Ala Phe Lys Phe Phe Met Glu Gln His Ile Glu
 645 650 655
 Asn Val Ile Lys Ser Tyr Arg Gln Arg Thr Tyr Arg Lys Asn Gln Leu
 660 665 670
 Glu Lys Glu Met His Lys Val Gly Leu Pro Asp Gln Thr Gln Ile Glu
 675 680 685
 Met Arg Lys Met Leu Asn Gln Lys Glu Ser Asn Tyr Ile Arg Leu Lys
 690 695 700
 Arg Ala Lys Met Asp Lys Ser Met Phe Val Lys Leu Lys Pro Ile Gly
 705 710 715 720
 Val Gly Ala Phe Gly Glu Val Thr Leu Val Ser Lys Ile Asp Thr Ser
 725 730 735
 Asn His Leu Tyr Ala Met Lys Thr Leu Arg Lys Ala Asp Val Leu Lys
 740 745 750
 Arg Asn Gln Val Ala His Val Lys Ala Glu Arg Asp Ile Leu Ala Glu
 755 760 765

Ala	Asp	Asn	Asn	Trp	Val	Val	Lys	Leu	Tyr	Tyr	Ser	Phe	Gln	Asp	Lys	770	775	780
Asp	Asn	Leu	Tyr	Phe	Val	Met	Asp	Tyr	Ile	Pro	Gly	Gly	Asp	Leu	Met	785	790	795
Ser	Leu	Leu	Ile	Lys	Leu	Gly	Ile	Phe	Glu	Glu	Glu	Leu	Ala	Arg	Phe	805	810	815
Tyr	Ile	Ala	Glu	Val	Thr	Cys	Ala	Val	Asp	Ser	Val	His	Lys	Met	Gly	820	825	830
Phe	Ile	His	Arg	Asp	Ile	Lys	Pro	Asp	Asn	Ile	Leu	Ile	Asp	Arg	Asp	835	840	845
Gly	His	Ile	Lys	Leu	Thr	Asp	Phe	Gly	Leu	Cys	Thr	Gly	Phe	Arg	Trp	850	855	860
Thr	His	Asn	Ser	Lys	Tyr	Tyr	Gln	Glu	Asn	Gly	Asn	His	Ser	Arg	Gln	865	870	875
Asp	Ser	Met	Glu	Pro	Trp	Glu	Glu	Tyr	Ser	Glu	Asn	Gly	Pro	Lys	Pro	885	890	895
Thr	Val	Leu	Glu	Arg	Arg	Arg	Met	Arg	Asp	His	Gln	Arg	Val	Leu	Ala	900	905	910
His	Ser	Leu	Val	Gly	Thr	Pro	Asn	Tyr	Ile	Ala	Pro	Glu	Val	Leu	Glu	915	920	925
Arg	Ser	Gly	Tyr	Thr	Gln	Leu	Cys	Asp	Tyr	Trp	Ser	Val	Gly	Val	Ile	930	935	940
Leu	Tyr	Glu	Met	Leu	Val	Gly	Gln	Pro	Pro	Phe	Leu	Ala	Asn	Ser	Pro	945	950	955
Leu	Glu	Thr	Gln	Gln	Lys	Val	Ile	Asn	Trp	Glu	Lys	Thr	Leu	His	Ile	965	970	975
Pro	Pro	Gln	Ala	Glu	Leu	Ser	Arg	Glu	Ala	Thr	Asp	Leu	Ile	Arg	Arg	980	985	990
Leu	Cys	Ala	Ser	Ala	Asp	Lys	Arg	Leu	Gly	Lys	Ser	Val	Asp	Glu	Val	995	1000	1005
Lys	Ser	His	Asp	Phe	Phe	Lys	Gly	Ile	Asp	Phe	Ala	Asp	Met	Arg	Lys	1010	1015	1020
Gln	Lys	Ala	Pro	Tyr	Ile	Pro	Glu	Ile	Lys	His	Pro	Thr	Asp	Thr	Ser	1025	1030	1035
Asn	Phe	Asp	Pro	Val	Asp	Pro	Glu	Lys	Leu	Arg	Ser	Asn	Asp	Ser	Thr	1045	1050	1055
Met	Ser	Ser	Gly	Asp	Asp	Val	Asp	Gln	Asn	Asp	Arg	Thr	Phe	His	Gly	1060	1065	1070

Phe Phe Glu Phe Thr Phe Arg Arg Phe Phe Asp Asp Lys Gln Pro Pro
1075 1080 1085

Asp Met Thr Asp Asp Gln Ala Pro Val Tyr Val
1090 1095